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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,276	02/07/2002	Yi-Bing Lin	LINY3022/EM	7905

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EXAMINER

BATURAY, ALICIA

ART UNIT	PAPER NUMBER
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2155

DATE MAILED: 04/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/067,276

Applicant(s)

LIN ET AL.

Examiner

Alicia Baturay

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 11-14 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/067,276.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. Claims 1-18 are pending.

Specification

2. The disclosure is objected to because of the following informalities: on page 5, lines 15 and 19, Applicant recites "Bandwidths." It is suggested that this word be written in the singular form. Additionally, on page 8, line 11, Applicant recites "Both x and y are measured in terms of bit." It is thought Applicant meant to write "Both x and y are measured in terms of bits." Appropriate correction is required.

Claim Objections

3. Claims 11-14, and 18 are objected to because of the following informalities: they are written in an outline format ((A), (B), etc.), and should be written in sentence form. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Regarding claims 2, 8, and 12, the phrase "the ratio of the first and second counters" renders the claim indefinite because it is unclear which combination the first and second counters are combined in to form the ratio. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-9 and 11-17 rejected under 35 U.S.C. 102(b) as being anticipated by Chung et al. (“A Contention Based Dynamic Consistency Maintenance Scheme for Client Cache”).
8. With respect to claim 1, Chung discloses an adaptive accessing system for single level strongly consistent cache, comprising: a server having a cache, at least one cached data entry (Chung, page 363, Fig. 1, “Database Server”), and a first counter and a second counter corresponding to each client of each cached data entry, the first counter measuring the number of cycles in an observed period, the second counter measuring the number of cycles that have updates in the cycles, where a cycle is defined as a period between two consecutive data accesses (Chung, page 365, “3.2.1 Protocol Choosing Mechanism,” paragraph 4); at least one client connected to the server via a communication link, each client having a cache (Chung, page 363, Fig. 1, “Workstation 1”); and a dynamic adjustment module corresponding to each client of each cached data entry (Chung, page 365, “3.1 The Definition of Temperature,” paragraph 1) for selecting a poll-each-read algorithm or a callback algorithm (Chung, page 364, “2.1 Classifications,” paragraph 2) based on a ratio of the first counter and the second counter to maintain a consistency of the caches in the client and the server (Chung, page 365, “3.1 The Definition of Temperature,” paragraph 1).

9. With respect to claims 2 and 12, Chung discloses the invention substantially as described in claim 1, including the system where the dynamic adjustment module selects the poll-each-read algorithm if the ratio of the first and the second counters is greater than $1/2$, otherwise selects the callback algorithm (Chung, page 365, "3.1 The Definition of Temperature," paragraph 1).
10. With respect to claims 3 and 13, Chung discloses the invention substantially as described in claim 1, including the system where the first counter is incremented when the poll-each-read algorithm is selected and the server receives a cached data entry access request from the client (Chung, page 365, "3.2.1 Protocol Choosing Mechanism," paragraph 4).
11. With respect to claims 4 and 14, Chung discloses the invention substantially as described in claim 3, including the system where, when the client desires to access a cached data entry existed in the cache thereof, and the server has received the cached data entry access request from the client and the cached data entry is invalid, the second counter is incremented (Chung, page 366, "3.2.2 Temperature Detecting Mechanism," paragraph 2).
12. With respect to claims 5 and 15, Chung discloses the invention substantially as described in claim 1, including the system as claimed where each cached data entry in the client has a third counter for measuring the number of accesses since a previous update, and when the callback algorithm is used and the client accesses the cached data entry in the cache thereof,

the third counter is incremented (Chung, page 366, “3.2.2 Temperature Detecting Mechanism,” paragraph 2).

13. With respect to claims 6 and 16, Chung discloses the invention substantially as described in claim 5, including the system as claimed where when the server updates the cached data entry thereof, the second counter is incremented (Chung, page 365, “3.2.1 Protocol Choosing Method,” paragraphs 4 and 5).

14. With respect to claims 7 and 17, Chung discloses the invention substantially as described in claim 6, including the system as claimed where if a cached data entry in the client is set to be invalid, the client sends a value of the third counter to the server and sets the value of the third counter to be zero, and the server adds the value of the third counter to the first counter (Chung, page 365, “3.2.1 Protocol Choosing Mechanism,” paragraph 4).

15. With respect to claims 8 and 18, Chung discloses the invention substantially as described in claim 1, including the system as claimed where when the value of the first counter is greater than a predetermined value, the server selects the poll-each-read algorithm or the callback algorithm by a ratio of the first counter and the second counter, and then sets both the first and the second counters to be zero (Chung, page 365, “3.1 The Definition of Temperature,” paragraph 1).

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16. With respect to claim 9, Chung discloses the invention substantially as described in claim 1, including the system as claimed where the communication link is wired link (Chung, page 363, "1 Introduction," paragraph 1; Fig. 1).
17. With respect to claim 11, Chung discloses an adaptive accessing method for single level strongly consistent cache (Chung, page 365, "3.1 The Definition of Temperature," paragraph 1), capable of selecting a poll-each-read algorithm or a callback algorithm (Chung, page 364, "2.1 Classifications," paragraph 2) to maintain a consistency of caches between a server and at least one client (Chung, page 365, Fig. 1, "Database Server" and "Workstation 1"), the method comprising the steps of: in the server, using a first counter for measuring the number of cycles in an observed period, and a second counter for measuring the number of cycles that have updates in the cycles, where a cycle is defined as a period between two consecutive data accesses; determining a ratio of the first counter and the second counter (Chung, page 365, "3.2.1 Protocol Choosing Mechanism," paragraph 4); and selecting a poll-each-read algorithm or a callback algorithm based on the ratio (Chung, page 365, "3.1 The Definition of Temperature," paragraph 1).

Claim Rejections - 35 USC § 103

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chung and further in view of Applicant Admitted Prior Art (AAPA).

With respect to claim 10, Chung discloses an adaptive accessing system for single level strongly consistent cache (Chung, page 365, "3.1 The Definition of Temperature," paragraph 1). But Chung does not expressly disclose the use of a wireless network. However, AAPA does teach the system as claimed where the communication link is a wireless link (AAPA, Fig. 1 Prior Art). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Chung with AAPA in order to ensure that client and server cache are consistent with each other (Chung, page 363, "1 Introduction," paragraph 2).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia Baturay whose telephone number is (571) 272-3981. The examiner can normally be reached at 7:30am - 5pm, Monday - Thursday, and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alicia Baturay
April 11, 2005


HOSAIN ALAM
PATENT EXAMINER